



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,683	01/05/2001	Wilfried Krug	GR 00 P 1014	5312

24131 7590 06/21/2004  
LERNER AND GREENBERG, PA  
P O BOX 2480  
HOLLYWOOD, FL 33022-2480

EXAMINER

MURPHY, RHONDA L

ART UNIT	PAPER NUMBER
----------	--------------

2667

8

DATE MAILED: 06/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/755,683

Applicant(s)

KRUG ET AL.

Examiner

Rhonda L. Murphy

Art Unit

2667

jpr

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 5/05/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Specification***

2. The disclosure is objected to because of the following informalities:

On page 9, line 24 "data access" should read "data access device".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1,2,3 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Wehrend (U.S. 6,614,782) et al, hereinafter referred as Wehrend.

**Claim 1** describes a network coupling device for coupling a home network to a local area network. Wehrend teaches a **network coupling unit connected between a local area network (for example, Ethernet LAN) and a communication network (for example, a public ISDN-oriented network)** (col. 3, lines 11 - 20). The ISDN-oriented network, shown in FIG. 1 as KN, is considered a home network, in which the network coupling unit is coupled.

The said network coupling device of claim 1 comprises functional components operating on a physical layer of an open system interconnect (OSI) reference model, including a first data access device, to be coupled to cabling of the home network, for extracting data packets from the cabling and for feeding the data packets into the cabling, while avoiding adverse effects on an actual intended purpose of the cabling; and a second data access device, to be coupled to a transmission medium of the local area network, for extracting data packets from the local area network;

Wehrend teaches a network coupling unit transmitting **data packets from and to the local area networks, from and to the ISDN-oriented communication network KN; for the exchange of data packets DP between the local area networks connected to the network coupling unit WAML and the communications network KN** (see FIG. 1 and col.7, lines 30 - 33, 46 - 48). In FIG. 1, **LM** combined with **KP** represents the first data access device for data transmission, connected to **KN** – which represents the

ISDN-oriented network or home network. Additionally, in FIG. 1, **WAML** signifies the second data access device for data transmission, connected to the LAN. Wehrend also discloses in col.7, lines 60 - 65, the data access terminal of the LAN operating at the physical layer 1 of the OSI reference model.

The said network coupling device of claim 1 also comprises a data transmission device operating on a data link layer of the OSI reference model and coupled to said first data access device and to said second data access device, said data transmission device providing an unchanged transmission of extracted data packets between said first data access device and said data access device without evaluating addressing information concerning the data link layer contained in the data packets.

In regard to the above statement, Wehrend teaches a network coupling unit comprising a data transmission path, noted as **DP** in FIG. 1, **exchanging data packets DP between WAML and KN, an unambiguous identification or address allocated to the LAN terminal, via WAML, where the exchange can occur at various levels of the OSI reference model** (col. 7, lines 46 - 57). Thus, the data transmission device, or data transmission path **DP** is capable of operating on various levels, including the data link layer of the OSI reference model while coupled to the two access devices – **LM** combined with **KP** and **WAML**, where the data transmission path **DP** provides transmission of the data packets without evaluating addressing information. Therefore, Wehrend teaches all limitations of claim 1.

**Regarding claims 2 - 3**, Wehrend teaches a network coupling unit according to claim 1, wherein the public network is that of an ISDN-oriented communication network (col. 6, lines 50 - 53). This ISDN-oriented network inherently includes a telephone system in which its cabling may be used for data transmission and power supply.

**Regarding claim 9**, Wehrend discloses the public network is that of an ISDN-oriented network which can be deemed a home network for the transmission of data to the LAN network, through the use of a network coupling unit, comprising two access terminals, and a data transmission path operating under the OSI reference model – in which an Ethernet LAN is built upon (col.6, lines 50 - 53; col. 7, lines 1 - 3).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4,5,6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wehrend in view of Walsh (U.S. 6,636,519) et al, hereinafter referred as Walsh.

**Regarding claims 4 - 7**, Wehrend discloses a network coupling unit set forth in the rejections of claims 1 - 3 and 9, as described above.

Wehrend does not explicitly disclose the network coupling unit wherein said data transmission path has a buffer memory for buffer-storing the extracted data packets before their transmission to one of the data access devices; nor does Wehrend disclose

a buffer memory as first-in-first-out (FIFO) memory, dual-port random access memory, or bidirectional memory.

However, the above-mentioned limitations are taught by Walsh. Walsh teaches a data transmission path containing buffer memory, in which the buffer memory stores the data packets before their transmission to one of the access devices between the coupled networks. The said buffer memory is a transmit FIFO memory and receive FIFO memory, and a dual-port RAM (col. 14, lines 24-33; col. 15, lines 16-18; Fig. 3,9C). The transmit and receive FIFO memories allow for bidirectional memory.

In view of this, having the system of Wehrend and then given the teaching of Walsh, it would have been obvious to one having ordinary skill in the art at the time the invention was made, to modify the system of Wehrend, by utilizing the buffer memories as FIFO - which can be utilized for data transmission in opposite directions, and dual-port RAM, as taught by Walsh. The motivation to combine the teachings is to obtain the benefit of buffering data to control the rate flow (col. 14, lines 24-33; col. 15, lines 16-18).

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wehrend in view of Rowett (U.S. 6,366,583) et al, hereinafter referred as Rowett.

**Regarding claim 8**, Wehrend discloses a network coupling unit set forth in the rejections of claims 1 - 3 and 9, as described above.

Wehrend does not explicitly disclose the network coupling unit wherein the first access device, second access device and data transmission device form an integrated chip.

However, Rowett teaches a router integrated onto a chip (**chip includes an internal bus that couples multiple channels having an external interface for connecting to different LAN lines**, col. 2, lines 7-13), coupled to a LAN and home network (see FIG. 2). As displayed in FIG. 1 and 2, this integrated chip comprises: a first access device (designated as **serial channels 51** consisting **SLM 48; for transmitting and receiving data packets on ISDN lines**, col. 4, lines 29-32, 35-36), a second access device (designated as **Ethernet 40; coupled to an Ethernet LAN**, col. 4, lines 55-57) and a data transmission device (designated as **DMAC 42; coupled to each serial channel and the Ethernet channel and conducts data transfers**, col. 2, lines 26-28, col. 4, lines 32-34). Therefore, Rowett's teachings of the above-mentioned devices, integrated onto a chip and coupled to a LAN and home network, encompass the limitations of claim 8.

In view of this, having the system of Wehrend and then given the teaching of Rowett, it would have been obvious to one having ordinary skill in the art at the time the invention was made, to incorporate the access devices and data transmission device onto an integrated chip. The motivation to combine the teachings of Wehrend and Rowett is to reduce manufacturing and assembly costs while providing an architecture that operates more efficiently with a wider variety of network configurations and network protocols (col. 3, lines 9-13).



**Conclusion**


8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited: US Patent 6,411,625 Furuhashi et al., US Patent 6,539,020 Barber et al., US Patent 6,324,178 Lo et al., US Patent 5,610,905 Murthy et al., US Patent 2004/0052268 Lewin et al., US Patent 2002/0186705 Kadambi et al., US Patent 5,970,069 Kumar et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rhonda L Murphy whose telephone number is (703) 308-9557. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (703) 305-4798. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

rlm

  
**RICKY NGO**  
**PRIMARY EXAMINER**

Application/Control Number: 09/755,683  
Art Unit: 2667

Page 9